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FAIRLEE BASS STATION

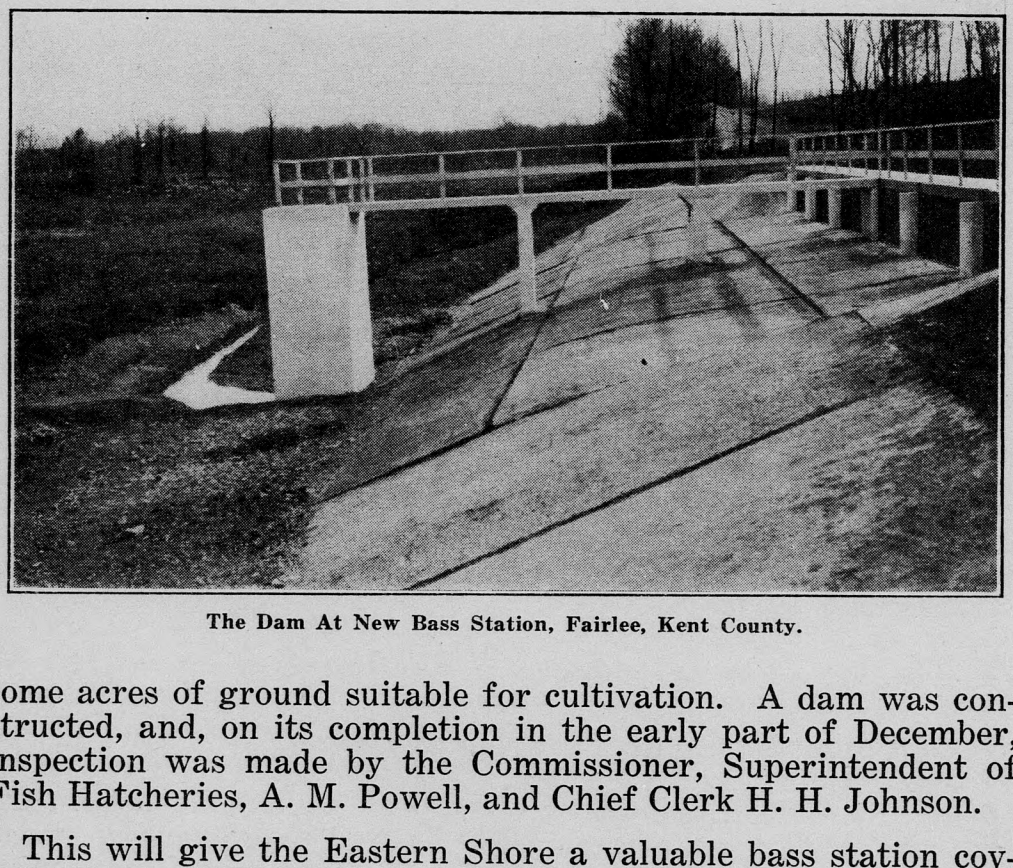
THE BLACK BASS has always been a valuable fish in the State, both from a commercial as well as a sporting standpoint, and, while the department has been successful in rearing this variety on a small scale, the demand has always exceeded the supply.

Since the General Assembly of 1927 passed the State-wide anglers' license law for fishing above tidewater, the department has been provided with funds for the extension of its fish-hatchery work and has been enabled to plant in the public streams thousands of legal-sized trout.

In the stream survey of the Western Maryland counties, made by Frederick R. Tresselt, it was found, however, that many streams which had heretofore been stocked with trout were not suitable for this variety of fish, which requires water of a rather low temperature, particularly brook trout. Such streams in many cases will support bass, and, to meet this situation, the department, aided by the U. S. Bureau of Fisheries, has

endeavored to rear both large- and small-mouth bass. This fish, however, does not lend itself to artificial propagation, and the fish culturist is faced with the problem of providing the proper environment for natural reproduction.

It was in this connection that the department purchased Fairlee mill-pond, in Kent County, about nine miles from Chestertown. The property is provided with a dwelling-house and



The Dam At New Bass Station, Fairlee, Kent County.

some acres of ground suitable for cultivation. A dam was constructed, and, on its completion in the early part of December, inspection was made by the Commissioner, Superintendent of Fish Hatcheries, A. M. Powell, and Chief Clerk H. H. Johnson.

This will give the Eastern Shore a valuable bass station covering more than fifty acres. The pond is almost filled, and brood bass will likely be transferred there during the late winter.

SHELL-PLANTING PROGRAM FOR 1930

THE MARYLAND LEGISLATURE of 1927 provided the funds for more extensive seed-oyster and shell planting than ever before, and the department, in 1928, planted 457,488 bushels of shells and 97,000 bushels of seed oysters, and, in 1929, planted 690,441 bushels of shells. Reports coming in from various sources, even in the Bay, where these shells have been distributed, show encouraging results. On the Three Sisters Bar, which is located in Chesapeake Bay, adjacent to Anne Arundel County below West River, the young oysters have attained a size of one and one and a half inches already. In

most of the tributary waters where shells were placed, reports coming in are more favorable as the season advances, even in Pocomoke Sound and Tangier Sound. In the latter waters the department has been rather discouraged in the past, due to almost total failure in its shell-planting operations.

At a meeting of the Sea Food Advisory Committee of the department, held in Baltimore on January 17, extensive plans were discussed for the purchase and planting of shells during the forthcoming spring and summer. While more shells were planted on the depleted rocks of the State last year than in the history of the department, plans are being laid to make 1930 a banner shell-planting year.

The experiments of our biologist during the past two years have developed the information that certain waters of the State are extremely valuable for spat collecting; especially is this noted in Tar Bay and Honga River. The department will set aside certain areas in this region, where experiments will be made in collecting the spat and then transferring it to suitable growing bottoms. While there is no question that oyster shells are the most practical clutch or spat collector in the Chesapeake Bay section, other collectors have been successfully used, such as faggots anchored close to the surface of the water, from which the small oysters can easily be removed after they attain six months' or a year's growth.

One of the largest canning factories on the Eastern Shore has offered to the Conservation Department scrap tin for use as a spat collector. In Professor Brook's book, "The Oyster," reference is made to tin for this purpose. The great advantage of this material is that the young oyster, after becoming attached, continues to grow, while the tin eventually disintegrates and leaves the oyster free. Tin is also light and easy to transplant, and is especially suitable for use on muddy bottoms because it easily holds up above the surface of the mud.

The U. S. Bureau of Fisheries has also made some experiments in Connecticut with cement-covered cardboard egg-crate partitions, and an interesting article on the subject, reprinted from the *Fisheries Service Bulletin,* is found elsewhere in this magazine.

NEW TYPE OF SEED-OYSTER COLLECTOR

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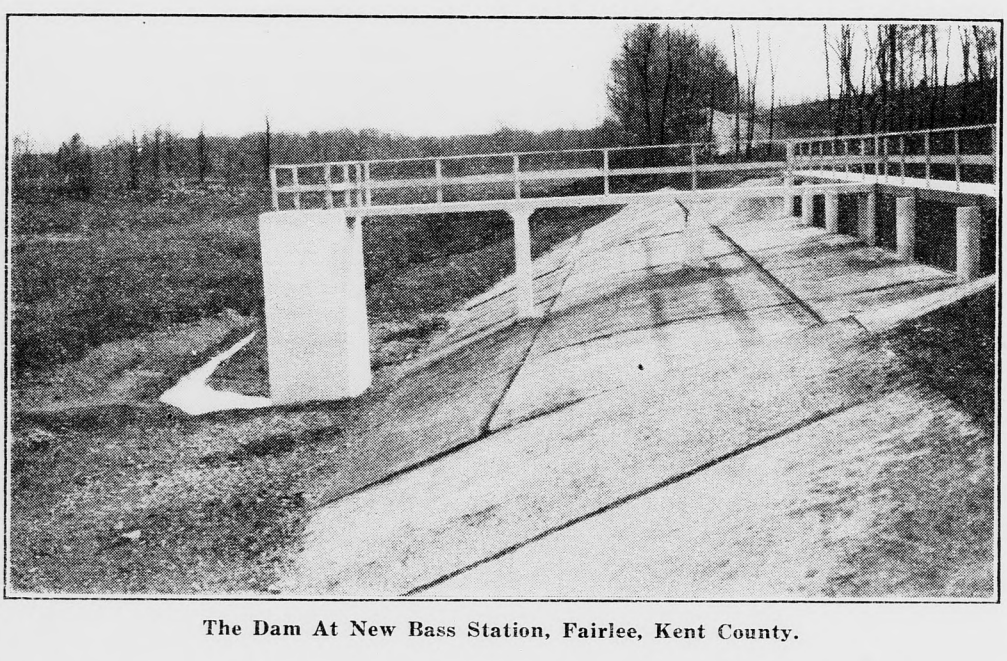

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In certain oyster-growing regions, such as South Bay, Long Island, and the tidal flats of the South Atlantic States, the setting of oysters is often so intensive that a high percentage of the spat dies from over-crowding, lack of oxygen, food, etc., and those surviving are so closely cemented together and misshapen that they are of little value as seed oysters. A cheap collector for use under such circumstances was devised by Mr. Prytherch in 1923, consisting of cardboard egg-crate partitions, which were covered with either paraffin and course sand or asphalt. The final step in perfecting this type of collector and making it of practical value is credited to W. H. Raye, president of the General Seafoods Corporation, who used a coating of lime, cement, and sand, which improved the collector in many respects. By covering the cardboard with this mixture we have essentially a series of compartments lined with a thin layer of shell-cone substance which has been found to be suitable for collecting thousands of spat and holding them until they are large enough to be broken apart and separated as single seed oysters.

During the past summer 2,000 set collectors of this general type were tested in South Bay, Long Island, and Milfort Harbor, Conn. The size of the collector was increased so as to consist of 22 partitions 15 by 1½ inches, giving a total of approximately 1,000 square inches of surface per collector. In South Bay the setting was quite heavy and covered nearly every collector with from 50 to 200 spat per square inch of surface. By comparing the growth and survival of spat on the partition collectors with those that had attached to oyster shells on the same area the real value and efficiency of the new method can be seen readily. On a single oyster shell having an average of approximately 20 square inches of surface there can rarely be produced more than 25 or 30 year-old seed oysters regardless of whether the original set numbered 100 or 1,000 spat per shell. However, the same amount of surface on the partition collector is capable of producing from 200 to 400 seed oysters, or approximately fifteen times as many per square inch as can be grown on the shells. With a set averaging 50 spat per square inch, as was obtained in South Bay, there is a loss of over 98 per cent. on the shells and only 70 per cent. on the collectors.

A single representative collector, taken from South Bay in September, yielded, by actual count, 13,200 single oysters, or the equivalent of what could be produced on a bushel of oyster shells. By separating the seed oysters from the collectors when they are a few months old it is possible to get a much larger and better-shaped year-old oyster than can be grown from sets obtained on shells., The new-type collector can be planted directly over the shells and will greatly increase the productivity of such oyster-setting bottoms.—*Fisheries Service Bulletin.*

LEGAL-SIZED TROUT PLANTED IN STATE STREAMS

DURING the late autumn and early winter months, the department, through its fish-culture division, placed in the cold streams of Frederick and Garrett Counties over ten thousand legal-sized trout. Five thousand of these fish were planted in Fishing Creek above the dam, along the corporation watershed property, by members of the Izaak Walton League of Frederick County, and 675 more were placed in the same stream below the dam. In addition, 3,000 of the same size fish were liberated in Tuscarora Creek. Ten trout is the limit allowed by law to be caught in any one day, and, assuming that all the fish liberated in Frederick County's waters survive, some eight hundred anglers would be able to secure their quota.

The following distribution of brook-trout recently made in Garrett County will also be of interest to fishermen:

Glade Run	300
Laurel Run	95
Cherry Creek (Deep Creek Lake)	380
Salt Block Creek	208
White Rock Creek	208
Bald Hill Run	40
Sang Run	100
Hoyes Run	316
Broad Ford	77
Little Youghiogheny River	208
Red Run	208
Bear Creek	200
Total	2,340

These fish ranged in size from nine to twelve inches and were reared at the Bear Creek station. There remain at this station about 18,000 trout, between five and six inches in length, which are being held for distribution in the fall of 1930.

About 5,000 brown and brook trout, four to six inches long, in the rearing ponds at Cushwa Springs, Washington County, will be liberated in the streams of that county when they have attained the legal size.

UNIFORM FISHERY CULL LAWS ADVOCATED FOR ADJOINING STATES

IT WAS BROUGHT OUT at the meeting of the National Association of Shellfish Commissioners, at Woods Hole, Massachusetts, that states interested in fisheries and having common waters should endeavor to regulate their cull laws so that, in so far as it is possible, they may be uniform.

Where sea-food dealers of one state ship their products into another state not having the same regulations governing sizes, etc., as their own state, considerable losses are sustained through confiscation of these products, if the state, like Maryland, will not permit fish, oysters, or crabs under the legal size, as prescribed by the laws of Maryland, to be sold.

The Conservation Department each spring experiences considerable difficulty with shipments of small crabs from North Carolina. These crabs reach the Baltimore market early in the season, but they are so small that they have little food value. Many confiscations have resulted, which caused considerable feeling on the part of the North Carolina shippers against the department.

After much effort, Maryland and Virginia passed uniform laws dealing with crabs, and they have worked to the great advantage of both states, increasing the supply in the upper Bay and resuscitating an industry that in recent years was threatened with extinction.

It was with much interest, therefore, that the Commissioner learned of North Carolina's intention to change her crab laws, and a letter was immediately dispatched to Captain John Nelson, Fisheries Commissioner of that State, urging upon him the importance of passing regulations governing the size of crabs to be caught, which would conform to the regulations now in force in Maryland and Virginia. Such a step would go a long way in fishery conservation and would be extremely aidful to this branch of the sea-food industry of the three states.

OYSTER-PACKING PLANTS SHOW IMPROVED SANITARY CONDITION

SEVERAL YEARS AGO, the oyster business of the Atlantic Coast was badly hit by a report from Chicago to the effect that oysters were to blame for an epidemic that had developed in that city.

It was proved that Maryland, and in fact the entire Chesapeake Bay region, was not responsible in any way for this condition; nevertheless the United States Public Health Service issued regulations governing the sanitary condition of all places where oysters are prepared for market. The Health Departments of the various states coöperated with the Government in carrying out a thorough survey of these places and made regulations which at first appeared to be drastic and hard on the packers.

To show what a few years of effort along this line have accomplished and how the industry has thrived under the improved conditions is best illustrated by quoting a letter received at this office from Dr. C. E. Collins, Health Officer at Crisfield, whose outstanding work in Somerset County is deserving of much praise.

Dr. Collins' letter reads:

"In looking over my records for the work done for the sea-food industry in Somerset County during the year 1929, I find that I have examined 1,308 employes in oyster plants and 503 employes in hard-crab meat plants. I also note that there are 55 oyster plants in Somerset County and 20 hard-crab plants. Those engaged in the soft-crab and fish business do not have to have a medical certificate, consequently are not in this number. You can see from these figures that a fair estimate would be about the same number engaged in tonging, dredging, and catching of crabs, as employed in the plants, which would make about 3,700 persons employed in the sea-food industry in Somerset County. From what I can gather, this number is about equal to all the sea-food employes of all other counties in the State.

"I am pleased to inform you that there is a decided change in the attitude of the owners and proprietors of the oyster plants of this county over previous years. During 1926, 1927, and 1928 there was a fault-finding condition existing among most of the proprietors of the sea-food plants, but this year I have found that 95% of these men have nothing but words of praise for your department as well as the State Health Department. This change is indeed quite gratifying and encouraging. There is a feeling among these parties that the administration is putting the sea-food industry on a business plan. This condition is indeed encouraging and, I believe, will continue to exist.

"The greatest impediment to advancement of the industry at the present time is the scarcity of oysters. This leads up to the proposition of planting and it is apparent that planting can not be successful without technical skill. It is indeed gratifying to know that the State intends to launch a campaign along these lines which will go a long way toward saving the industry.

Very truly yours,

C. E. COLLINS, M. D."

OYSTER CONDITIONS IN ANNE ARUNDEL COUNTY

CAPT. HERMAN A. WOODFIELD, member of the Advisory Committee of the Conservation Department, advises that oysters in the shell in West River have sold at higher prices than has ever been known in the history of the business. The oystermen have had a fairly successful season in spite of the fact that the working days, owing to bad weather conditions, have been below normal.

Captain Woodfield also stated that the prospects for another year in the area from Sandy Point to Holland Point are good, with enough small oysters on the rocks to take the place of those caught this year, and almost no mussels present.

SEED-OYSTER AREAS

THE DEPARTMENT has already received a number of inquiries from lessees of oyster ground in the State regarding the opening of the head-of-the-Bay area for the taking of seed oysters next spring. At this time it is impossible to say whether this region will be available for seed or not, as it will be necessary to make some further investigations. Freshets and other causes have been responsible for destruction of many of the oysters in the upper Bay in recent seasons.

The department is also making investigations of areas outside of the State, where it is likely seed can be secured, and will shortly be able to give out some information on the probable cost of such oysters delivered within the boundaries of Maryland.

HEAVY PENALTY FOR ILLEGAL SCRAPING

TWO OYSTERMEN who were recently arrested for scraping in the Wicomico River, St. Mary's County, at night with power boats, were taken before a magistrate at Rock Point by the local inspector and were sentenced to six months in the House of Correction. When asked for a statement on these cases, the magistrate replied:

> "These men were guilty of three offenses—they were scraping in exempted waters, at night, and in a power boat, all carrying heavy penalties. The reason I gave them a House of Correction sentence is to stop a growing evil that I felt could not be trifled with. Last year there were only a few that violated these laws. This year there were many more. They carry their scrapes locked in their cabins and use them as soon as the inspectors are out of sight. To put a small fine on them would not stop them. They would take the risk. I think the effect is already shown, as most of the oyster thieves have put their scrapes ashore. I warned them when they would come ashore about what they were doing and what would happen if they were caught . . . "

While the sentence is a severe one, the department feels that this magistrate was justified in taking the action he did for the reasons given by him—to put down a serious violation and to conserve the oyster industry in his section.

This action is in marked contrast to that of certain magistrates in other localities of the State who are prone to dismiss such cases with a mere warning.

CHESAPEAKE OYSTERS PLANTED IN HAWAII

HAWAII'S "painted fish," octopus, squid, eels, and other varied forms of marine life are not enough for the territorial fish and game commission, says a recent mail despatch. The commission is of the opinion that the islands can develop other game and food fish and is carrying out a well-defined policy of "planting."

Both salmon and trout eggs are being secured from Pacific Coast hatcheries and planted here. Recently the commission began the importation of seed oysters. The two chief varieties are those from Chesapeake Bay on the Atlantic Coast and the Australian rock oyster. Oysters from Japan have already been found to do well here. It is believed that Eastern as well as the smaller Western coast oyster can thrive in island waters.

—*Chicago Daily News.*

SEINING OF CANAL NETS 3,692 FISH

Work on Chesapeake and Ohio Removes Large Number of Bass and Other Fish

Special Dispatch to The Washington Star.

ROCKVILLE, MD., January 13.

The work of seining the "pockets" in the Chesapeake & Ohio Canal between the District of Columbia line and the mouth of the Monocacy, which had been in progress for some time under the joint direction of the United States Bureau of Fisheries and the State Conservation Commission, with the Montgomery County Fish and Game Protective Association coöperating, has been completed.

A report in possession of Carroll Waters, chief deputy game warden for this county, shows that a total of 3,692 large- and small-mouth black bass, crappie, rock bass and bream were rescued and transferred to the Potomac River, the number of each species taken being as follows: Small-mouth black bass—Adults, 424; yearlings, 368; fingerlings, 119. Large-mouth black bass—Adults, 1,149; yearlings, 670; fingerlings, 305. Crappie or strawberry bass—Adults, 225; yearlings, 21. Rock bass, 160 adults. Bream, or blue gills, 251 adults. Bushels of catfish, carp, eels, and other kinds of fish also were taken and distributed free to many persons.

It is believed that the fish transferred to the Potomac will do much toward replenishing the supplies, which had become much depleted there. According to Deputy Waters the seining was the most systematic and thorough yet undertaken in the canal.

A PROFITABLE VENTURE IN OYSTER FARMING

THE DEPARTMENT has some 1,200 lessees on its books, and many of these "oyster farmers," in fact the majority, are watermen. The question of how much it is possible to realize from an acre of oyster bottom has often been asked. The answer given by the department is that it depends very much on the location of the bottom, the character of the seed placed thereon, food and other conditions. In a number of cases it has been brought to our attention that a profit of $100 an acre has been made in two years, and in other cases planters have claimed no profit whatsoever.

In the waters of Pocomoke Sound, which is partly in the State of Virginia and partly in Maryland, a Virginia planter just across the line on a 10-acre area has made one of the largest profits ever brought to the attention of the department.

In 1926, this man purchased from the James River section of Virginia, 4,800 bushels of seed oysters, which cost him $1,700 planted overboard. The seed ran about 1,500 oysters to a bushel. They were planted on what is known as the "Pocomoke Muds," and were harvested in the fall of 1929. Fifteen thousand bushels of oysters were taken up, which sold for $12,000, making a net gain of $10,000 on the deal.

SOLOMONS OFFERS SITE FOR LABORATORY

INTEREST continues to develop in tidewater Maryland in the proposed marine laboratory. A committee of Solomons Island citizens, headed by Mr. H. H. Hellen, invited the Conservation Commissioner to visit the island on January 4 and inspect a site which they are offering to the department for the establishment of the marine laboratory. The Commissioner made the trip to Calvert County, accompanied by Dr. R. V. Truitt, of the University of Maryland, who has been conducting experiments in connection with the spawning of oysters for a number of years at the temporary laboratory which the department has maintained at Solomons.

The entire Calvert County was represented at this meeting and those present were enthusiastic about having the department establish the permanent laboratory on Solomons Island. A beautiful site of approximately one acre in the central part of the island, and valued at about $4,000, was offered to the State.

Both Dorchester and Somerset Counties are also in the field for the laboratory and have offered sites which were inspected last fall.

DIP-NET LICENSE

THE SEASON for taking certain fish by dip-netting above tidewater begins on February 1 and runs to March 31, except in the waters of the Potomac River lying in Washington County, where the season continues to the 30th of April. In Garrett County and some parts of the Susquehanna River, dip-netting is entirely prohibited. The license is sold only to residents and every net operated must have a separate license. Dip-netting is also prohibited in any private lake or pool without the permission of the owner, or in any waters which are closed to the public for fishing by the laws of Maryland. Only suckers, catfish, carp, eels, and gudgeons may be taken with dip-nets under this license, which is separate and distinct from the regular angler's license.

License may be obtained from the Clerk of the Circuit Courts in the various counties or the Clerk of the Court of Common Pleas in Baltimore City.

COMPARATIVE STATEMENT OF OYSTER PRODUCTION

THE FOLLOWING comparative statement, giving the oyster production for the first four months of the present oyster season, as against a similar period for last year, shows a consistent decline for each month, the department regrets to note, not only in number of bushels used by Maryland packers this season but in the number of bushels exported and also imported.

	Bushels Md. Packers	*Bushels Exported*	*Bushels Imported*
September, 1928	39,695	------	333
September, 1929	33,863	1,000	------
October, 1928	271,088	7,895	15,473
October, 1929	202,913	3,530	19,861
November, 1928	485,127	9,368	92,662
November, 1929	432,752	7,300	63,617
December, 1928	460,249	4,320	100,000
December, 1929	417,459	5,152	122,592
TOTALS			
1928	1,256,159	21,583	208,471
1929	1,086,987	16,982	206,070
Decreases	169,172	4,601	2,401

While the department is confronted with this decrease, it can be traced to the dredging areas of the Chesapeake Bay and the Potomac River, where the bars have been very much depleted by overfishing and not having sufficient rest to catch up.

It might be said that the foundation for this present depletion was laid between the years 1880 and 1890, when more than eight hundred dredge boats worked the Bay and Potomac, taking oysters of illegal size, and selling hundreds of thousands of bushels out of the State for as low as 7c. a bushel.